

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
CENTRAL VALLEY REGION

ORDER NO. R5-2009-\_\_\_\_\_

WASTE DISCHARGE REQUIREMENTS  
FOR  
STARWOOD POWER-MIDWAY, LLC AND PAO INVESTMENTS, LLC  
STARWOOD-MIDWAY POWER PLANT  
FRESNO COUNTY

The California Regional Water Quality Control Board, Central Valley Region (hereafter Central Valley Water Board) finds that:

1. Starwood Power-Midway, LLC, (Starwood), a Delaware limited liability company, submitted a Report of Waste Discharge (RWD) dated 6 May 2008 to obtain Waste Discharge Requirements (WDRs) for the discharge of industrial process wastewater to an unlined surface impoundment at the Starwood-Midway Power Plant (Facility). Additional information was submitted on 6 June 2008 and the RWD was deemed complete by Central Valley Water Board staff in a letter dated 26 June 2008.
2. Starwood, owner and operator of the Facility, has a signed lease with the property owner, PAO Investments, LLC, a California limited liability company. Both Starwood and PAO Investments, LLC are hereafter jointly referred to as Discharger.
3. The Facility is at 43627 West Panoche Road, an unincorporated area of western Fresno County. The Facility is about 12 miles southwest of the City of Mendota and two miles east of Interstate 5, as shown on Attachment A, which is attached hereto and made a part of this Order by reference.
4. The 5.57-acre Facility is on a 128-acre parcel (Assessor's Parcel Number 027-060-78S) in the southwest quarter of Section 5, Township 15 South, Range 13 East, Mount Diablo Base and Meridian, as shown on Attachment B, which is attached hereto and made a part of this Order by reference.
5. The Facility is a 120 megawatt peaking-power electrical generation plant with four natural gas-fired combustion turbine generators. The Facility is expected to generate between 400 and 4,000 hours of electricity per year.
6. The Facility needs high-purity water for inlet air fogging and turbine combustor water injection for nitrous oxide control.

**Source Water Characteristics**

7. The source water for the Facility is reclaimed agricultural backwash water from 162 irrigation system sand filters, owned and operated by Baker Farming Company, LLC (Baker Farms). Baker Farms uses approximately 24,000 acre-feet of water annually from the California Aqueduct to irrigate about 7,000 acres. Approximately 160 acre-feet of backwash water is produced annually by Baker Farms. The Facility property owner, PAO Investments, LLC consists of members of the Baker family.

8. Baker Farms and Starwood have a 7-year contract for Baker Farms to provide backwash water to Starwood. The contract is subject to termination by Baker Farms with two years notice and, if not terminated, will continue for a term not to exceed 15 years, the duration of Starwood's Power Purchase Agreement with Pacific Gas and Electric.
9. On 19 February 2008, backwash water samples were collected by Starwood from Baker Farms. The analytical results are shown in Table I below:

**Table I**

**Backwash Water Constituent Concentrations**

(Concentrations in milligrams per liter, except where noted)

<b>Constituent</b>	<b>Concentration</b>
Arsenic	0.0023
Barium	0.035
Bicarbonate Alkalinity (as CaCO <sub>3</sub> )	84
Boron	0.27
Calcium	36
Carbonate Alkalinity (as CaCO <sub>3</sub> )	<1
Chloride	69
Electrical Conductivity <sup>1</sup>	500
Fluoride	0.12
Iron	0.064
Magnesium	15
Nitrate (as NO <sub>3</sub> )	15
Potassium	4
Selenium	0.0037
Silica, Total	20
Sodium	54
Sulfur	59
Total Dissolved Solids	310

<sup>1</sup> Specific Conductance measured in micromhos per centimeter at 25° Centigrade

10. The source water is conveyed to the Facility by a 3-inch diameter underground pipeline from a 30 acre-foot collection basin. The basin is about 1.5 miles southeast of the Facility as shown on Attachment C, which is attached hereto and made a part of this Order by reference.
11. The source water is treated at the Facility with sodium hypochlorite, a sand filter, and then a reverse-osmosis (RO) unit and a demineralizer process. The treatment system includes a 75,000-gallon raw water storage tank and two 75,000-gallon demineralized water storage tanks. The Facility requires about 10.2 acre-feet of treated water annually for 400 hours and 102 acre-feet for 4,000 hours of electric generation.

## Wastewater Characteristics

12. Based on the backwash water chemistry, the RO system supplier predicted an annual RO reject water volume total of 4.38 acre-feet for 400 hours and 43.8 acre-feet for 4,000 hours of electric generation.
13. The RO system supplier predicted the concentration of chemical constituents in the reject water from the RO system. The prediction was based on the backwash water quality from Baker Farms, treatment using the proposed RO membrane, and the resulting mass balance. Predicted wastewater constituent concentrations are shown in Table II below.

**Table II**  
**Predicted RO Reject Wastewater Constituent Concentrations**

(Concentrations in milligrams per liter, except where noted)

Constituent	Concentration
Arsenic	0.0076
Barium	0.120
Bicarbonate Alkalinity (as CaCO <sub>3</sub> )	272
Boron	0.38
Calcium	119
Carbonate Alkalinity (as CaCO <sub>3</sub> )	2.3
Chloride	306
Electrical Conductivity <sup>1</sup>	1,650
Fluoride	0.39
Iron	0.21
Magnesium	50
Nitrate (as NO <sub>3</sub> )	43
Potassium	11
Selenium	0.012
Silica, Total	65
Sodium	176
Sulfur	196
Total Dissolved Solids	1,242

<sup>1</sup> Specific Conductance measured in micromhos per centimeter at 25° Centigrade.

## Surface Impoundment Design

14. Reject water from the RO system and backwash/rinse water from the normal maintenance of the RO multimedia filter (wastewater) is conveyed via pipelines to four concrete catch basins. An underground pipeline conveys the wastewater to an unlined surface impoundment for disposal by evaporation and percolation. The water treatment system and surface

impoundment are shown on Attachment D, which is attached hereto and made a part of this Order by reference.

15. The preliminary Facility Grading Plan and Cross Sections submitted with the RWD indicate the bottom of the surface impoundment is at an elevation of 397 feet above mean sea level (amsl) and the top is at an elevation of 403 feet amsl. The surface impoundment was designed to accommodate the 100-year, 24-hour storm event on the site.
16. The surface impoundment is designed to hold approximately 1.8 acre-feet of wastewater with two feet of freeboard. The sidewalls have steep slopes of two horizontal to one vertical to discourage waterfowl nesting.

### **Site-Specific Conditions**

17. Land use in the vicinity is primarily large-scale agricultural and some rural residential. The CalPeak Panoche and Wellhead Peaker electrical generation plants are immediately west and south of the Facility, respectively. Adjacent to and west of the CalPeak Panoche plant is the PG&E electrical substation. A short distance to the south and west of the substation is the Panoche Energy Center electrical generation plant.
18. The climate in the area is semi-arid, with long, hot, dry summers and mild winters. The average annual precipitation at Five Points SSW, the nearest weather station about 35 miles south of the Facility, is 6.92 inches, based on 58 years of data. The 100-year, 24-hour precipitation event at the Facility is estimated to be about 2.5 inches.
19. The average annual evaporation at the Los Banos Detention Reservoir, about 30 miles northwest of the Facility, is about 108 inches, based on 38 years of data. Based on eight years of data, the average annual evaporation rate at the Little Panoche Detention Dam, about 15 miles northwest of the site is 111 inches.
20. Federal Emergency Management Agency Flood Insurance Rate Map, Community Panel No. 1975, dated 19 July 2001, shows the Facility is partially within the special flood hazard area (Zone A) subject to the 100-year flood. The U.S. Department of Homeland Security Elevation Certificate states the base flood elevation is 404 feet amsl. The Facility is surrounded by an engineered earthen berm extending at least one foot above the base flood elevation.
21. Storm water from the Facility is retained onsite and collected in a subsurface storm drain system that discharges to an unlined onsite storm water retention basin.
22. No active or potentially active faults are known to cross the Facility. The closest known active fault is the Ortigalita fault zone, located 19 miles west of the site. The next closest known active fault is the San Andreas fault located 28 miles west of the Facility.
23. The nearest natural surface water body is Panoche Creek, an ephemeral stream about 1.8 miles northwest of the Facility. The California Aqueduct is about 2.6 miles northeast of the Facility.

24. The Facility is on the Panoche Creek alluvial fan which slopes to the east-northeast at a gradient of about 30 feet per mile near the Facility. Surface soils consist of the Panoche Series which is comprised of about 98 percent clay loam and two percent sandy loam.

### **Basin Plan, Beneficial Uses, and Water Quality Objectives**

25. The *Water Quality Control Plan for the Tulare Lake Basin, 2<sup>nd</sup> Edition - 1995* (Basin Plan) designates beneficial uses, establishes numerical and narrative water quality objectives, contains implementation plans and policies for protecting all waters of the Basin, and incorporates by reference plans and policies of the State Water Board. Pursuant to Section 13263(a) of the California Water Code (CWC), these WDRs implement the Basin Plan.
26. The Facility is in the Westside Basin Hydrologic Unit, Detailed Analysis Unit (DAU) No. 244. The Basin Plan designates groundwater beneficial uses in this DAU as municipal and domestic supply (MUN), agricultural supply (AGR), and industrial service supply (IND).
27. The Facility is in the South Valley Floor Hydrologic Unit, Westlands Hydrologic Area No. 551.10. The Basin Plan designates surface water beneficial uses in this area as agricultural supply (AGR), industrial service supply (IND), industrial process supply (PRO), water contact recreation (REC-1), non-contact water recreation (REC-2), warm freshwater habitat (WARM), wildlife habitat (WILD), rare, threatened, or endangered species (RARE), and groundwater recharge (GWR).
28. The Basin Plan includes a water quality objective for chemical constituents that at a minimum, requires waters designated as domestic or municipal supply to meet the maximum contaminant levels (MCLs) specified in Title 22, Division 4, Chapter 15. The Basin Plan recognizes that that the Central Valley Water Board may apply limits more stringent than MCLs to ensure that waters do not contain chemical constituents in concentrations that adversely affect beneficial uses.
29. The Basin Plan establishes narrative water quality objectives for chemical constituents, tastes and odors, and toxicity. The toxicity objective requires groundwater to be maintained free of toxic substances in concentrations that produce detrimental physiological responses in human, plant, animal, or aquatic life associated with designated beneficial uses. Quantifying a narrative water quality objective requires a site-specific evaluation of those constituents that have the potential to impact water quality and beneficial uses.

### **Groundwater Considerations**

30. The Facility is generally underlain by alluvium of the Panoche Creek fan consisting of interbedded, poorly to moderately sorted, gravel, sand, silt, and clay layers of varying thickness.
31. The Corcoran Clay divides the groundwater system into an upper semi-confined zone, and a lower confined zone with the vertical gradient between the two zones typically downward. The Corcoran Clay was encountered at a depth from 660 to 785 feet below ground surface (bgs) in a monitoring well boring at the Panoche Energy Center.

32. There are seven offsite groundwater wells within ½ mile of the Facility. One United States Geological Survey (USGS) groundwater well monitors the lower confined zone, and a second well monitors the upper semi-confined zone. At the Panoche Energy Center, two groundwater wells monitor the lower confined zone, and a third well monitors the upper semi-confined zone. At the CalPeak Panoche facility, an industrial supply well extracts groundwater from the upper semi-confined zone. An inoperable irrigation well is completed in the lower confined zone. Irrigation wells within 2 miles of the Facility are completed in the lower confined zone.
33. During February 2008, Starwood installed groundwater monitoring well MW-1 on the west side of the Facility, about 330 feet upgradient from the surface impoundment. MW-1 is shown on Attachment D. The well is constructed with 5-inch diameter polyvinyl chloride casing and completed in the upper semi-confined zone with the screened interval from 160 to 220 feet bgs. Groundwater was first encountered at 170 feet bgs.
34. During January 2009, Starwood installed two groundwater monitoring wells, MW-2 and MW-3, at the locations shown on Attachment D. The wells are completed in the upper semi-confined zone and constructed with 4-inch diameter polyvinyl chloride casing and screened from 160 to 220 feet bgs.
35. During March 2008, Starwood collected baseline groundwater samples from monitoring well MW-1. During January 2009, Starwood collected baseline groundwater samples from monitoring wells MW-2, and MW-3. The range of analytical results for selected constituents in the groundwater, source water, the predicted RO reject wastewater, and numerical water quality objectives are shown in Table III on the following page.

Tentative

**Table III**  
**Source Water, Predicted RO Reject Wastewater, and Baseline Groundwater Analytical Results with Municipal and Agricultural Water Quality Objectives**

(Concentrations in milligrams per liter, except where noted)

Constituent	Source Water	Predicted RO Reject Wastewater	Baseline Groundwater (Range of samples)	Water Quality Objectives	
				Municipal	Agricultural <sup>1</sup>
Arsenic	0.0023	0.0076	0.039 – 0.063	0.010 <sup>2</sup>	0.1
Barium	0.035	0.120	0.011 – 0.022	1 <sup>2</sup>	-
Bicarbonate <sup>3</sup>	84	271	73 – 85	-	-
Boron	0.27	0.38	3.0 – 3.2	-	0.7
Calcium	36	119	580 – 640	-	-
Carbonate <sup>3</sup>	<1	2.3	<1	-	-
Chloride	69	306	880 – 1,100	250 – 600 <sup>4</sup>	106
Electrical Conductivity <sup>5</sup>	500	1,650	5,800 – 7,000	900 – 2,200 <sup>4</sup>	700
Fluoride	0.12	0.39	<0.1 – 0.32	2.0 <sup>2</sup>	1
Iron	0.064	0.21	<0.05	0.3 <sup>4</sup>	5
Magnesium	15	50	390 – 420	-	-
Nitrate (as NO <sub>3</sub> )	15	43	1,000 – 1,100	45 <sup>2</sup>	-
Potassium	4	11	11 – 13	-	-
Selenium	0.0037	0.012	0.88 – 1.4	0.05 <sup>2</sup>	0.02
Silica	20	65	45 – 48	-	-
Sodium	54	176	690 – 760	-	69
Sulfate	59	196	2,200 – 2,500	250 – 600 <sup>4</sup>	-
TDS <sup>6</sup>	310	1,242	5,200 – 6,300	500 – 1,500 <sup>4</sup>	450

<sup>1</sup> Ayers R.S. and Westcot D.W., 1985, *Water Quality for Agriculture*

<sup>2</sup> Primary Maximum Contaminant Level (MCL) - Title 22 Drinking Water Standards

<sup>3</sup> Alkalinity as CaCO<sub>3</sub>

<sup>4</sup> Secondary MCL – Title 22 Drinking Water Standards

<sup>5</sup> Specific Conductance measured in micromhos per centimeter at 25° Centigrade

<sup>6</sup> Total dissolved solids

36. The data in Table III indicate that:

- a. Baseline groundwater concentrations of boron, chloride, electrical conductivity (EC), nitrate, selenium, sodium, sulfate, and total dissolved solids (TDS) exceed their respective numeric water quality objectives for MUN and/or AGR;
- b. Predicted RO reject wastewater concentrations of arsenic, boron, calcium, chloride, EC, magnesium, nitrate, selenium, sodium, sulfate, and TDS are less than their respective baseline groundwater concentrations; and,
- c. Predicted RO reject wastewater concentrations of barium, bicarbonate and carbonate (considered one constituent, bicarbonate, because their occurrence is pH dependent),

fluoride, and silica in groundwater exceed their respective baseline groundwater concentrations.

### Antidegradation Analysis

37. The predicted concentrations of chloride, EC, sodium, and TDS in the RO reject wastewater, while exceeding their respective water quality objectives, do not exceed their respective baseline groundwater concentrations. The applicable salinity objectives are the greater of naturally occurring background or the water quality objectives that would otherwise apply. While there are no historical data available to the Central Valley Water Board to determine historic groundwater quality, the groundwater sampling data establishes that the predicted RO reject wastewater concentrations of these constituents are below baseline groundwater concentrations, and the discharge should not cause groundwater degradation. Three monitoring wells at the Facility monitor groundwater quality.
38. The discharge of wastewater to the surface impoundment could potentially cause degradation of the upper semi-confined groundwater for barium, bicarbonate, fluoride, and silica. The predicted RO reject wastewater concentrations of barium and fluoride do not exceed their respective water quality objectives for MUN and/or AGR. Although there are no numerical water quality objectives, and narrative water quality objectives have not been established for bicarbonate and silica, their predicted RO reject wastewater concentrations are not at levels that could adversely affect the beneficial uses of the upper semi-confined groundwater.
39. State Water Board Resolution No. 68-16 (*"Policy with Respect to Maintaining High Quality Waters of the State"*) (hereafter Resolution 68-16) prohibits degradation of groundwater unless it has been shown that:
  - a. The degradation is consistent with the maximum benefit to the people of the State;
  - b. The degradation will not unreasonably affect present and anticipated future beneficial uses;
  - c. The degradation does not result in water quality less than that prescribed in state and regional policies, including violation of one or more water quality objectives; and
  - d. The discharger employs Best Practicable Treatment or Control (BPTC) to minimize degradation.
40. The anticipated de-minimus groundwater degradation is in the best interest of and consistent with the maximum benefit to the citizens of California. This determination is supported by the following:
  - a. Operation of the Facility will supply a more reliable electrical supply to the State during periods of peak power use.
  - b. Operation of the Facility will provide increased employment in the area.
  - c. The Discharger will utilize reclaimed backwash water from an irrigation sand filtration system. This water would not have been reused by Baker Farms and would have been lost to evaporation and percolation if the Facility were not constructed.



- d. The upper semi-confined groundwater is not known to be used within several miles of the Facility except for one industrial supply well. Irrigation wells are completed in the lower confined groundwater.
- e. Any degradation anticipated by barium, bicarbonate, fluoride, and silica is de-minimus compared to the improvement in groundwater quality of chloride, nitrate, sodium, sulfate, and TDS constituent concentrations in the discharge.
- f. The predicted concentrations of barium and fluoride in the wastewater discharge do not exceed their respective water quality objectives. Water quality objectives have not been established for bicarbonate and silica, and
- g. The discharge will not unreasonably affect present and anticipated future beneficial uses of the upper semi-confined groundwater.

### **Designated Waste and Title 27**

- 41. CWC Section 13173 defines designated waste as either:
  - a. Hazardous waste that has been granted a variance from hazardous waste management requirements pursuant to Section 25143 of the Health and Safety Code or,
  - b. Non-hazardous waste that consists of, or contains, pollutants that, under ambient environmental conditions at a waste management unit, could be released in concentrations exceeding applicable water quality objectives or could reasonably be expected to affect beneficial uses of the waters of the state contained in the appropriate state water quality control plan.
- 42. Release of designated waste is subject to full containment pursuant to the requirements of Title 27, CCR, Section 20095 et seq (hereafter Title 27). Title 27 Section 20090(b) exempts discharges of designated waste to land from Title 27 containment standards provided the following conditions are met:
  - a. The applicable regional water board has issued waste discharge requirements, or waived such issuance;
  - b. The discharge is in compliance with the applicable basin plan; and,
  - c. The waste is not hazardous waste and need not be managed according to Title 22, CCR, Division 4.5, Chapter 11, as a hazardous waste.
- 43. The discharge is exempt from the Title 27 containment standards because the discharge is not considered hazardous waste, the applicable regional water board has issued waste discharge requirements, and, applying the directives of State Water Board Resolution No. 68-18, the antidegradation analysis as described in Findings 37-40, finds the discharge to be in compliance with the applicable Basin Plan.

### **CEQA and Other Legal References**

- 44. The California Energy Commission (CEC), as the lead agency under the California Environmental Quality Act (CEQA), has a facility certification process to examine public

health and safety, environmental impacts, and engineering aspects of proposed electrical generation plants. Under the certified program, the CEC is exempt from having to prepare an environmental impact report (EIR). However, the facility certification process is functionally equivalent to an EIR because it requires an environmental analysis, including an analysis of alternatives and mitigation measures, to minimize any significant adverse effect on the environment.

45. Central Valley Water Board staff reviewed the *Application for Certification* submitted by Starwood to the CEC, the lead agency under a CEQA-equivalent process. Comments to the CEC concerning water quality were provided in correspondence dated 20 December 2006.
46. On 16 January 2008, the CEC adopted Order No. 08-0116-02 which adopts the *Commission Decision*, approves the *Application for Certification* for the Facility, and grants a certificate to construct and operate the Facility. The approval of the *Application for Certification* is subject to the timely performance of the Conditions of Certification and Compliance Verifications enumerated in the *Commission Decision*.
47. The *Commission Decision* includes a finding which states that implementation of the Conditions of Certification described in the Water Resources section of the document will result in potential water resource impacts being mitigated to insignificance.
48. These WDRs implement measures necessary to mitigate any impacts to groundwater to less than significant levels, including Facility Specification B.9, which stipulates waste constituents cannot be released or discharged in a concentration or mass that causes violation of the WDRs groundwater limitations.
49. The State Water Board adopted Order No. 97-03-DWQ (NPDES General Permit No. CAS000001), on 17 April 1997, specifying WDRs for discharge of storm water associated with industrial activities, excluding construction requirements, and requiring submittal of a Notice of Intent (NOI) by industries covered under the permit. All storm water at the Facility will be directed to and contained in a storm water retention pond. Consequently, the Facility will not be required to obtain coverage under General Permit No CAS00001.
50. The State Water Board adopted Order No. 99-08-DWQ (NPDES General Permit No. CAS000002), on 17 April 1997, specifying WDRs for discharge of storm water associated with construction activities and requiring submittal of a Notice of Intent (NOI) to obtain coverage under the permit. Starwood's Storm Water Pollution Prevention Plan (SWPPP) has been reviewed by Central Valley Water Board staff and it appears that the SWPPP meets the requirements of the General Permit. Starwood has submitted a NOI to the State Water Board.

### **General Findings**

51. These WDRs do not authorize violation of any federal, state, or local law or regulation. The requirements prescribed herein do not authorize the commission of any act causing injury to the property of another, nor protect the Discharger from liabilities under federal, state, or local law.

52. Pursuant to CWC Section 13263(g), discharge is a privilege, not a right, and adoption of these WDRs does not create a vested right to continue the discharge.
53. The Central Valley Water Board will review these WDRs periodically and will revise requirements when necessary.
54. CWC Section 13267(b) states: *"In conducting an investigation specified in subdivision (a), the Regional Water Board may require that any person who has discharged, discharges, or is suspected of having discharged or discharging, or who proposes to discharge waste within its region, or any citizen or domiciliary, or political agency or entity of this state who has discharged, discharges, or is suspected of having discharged or discharging, or who proposes to discharge, waste outside of its region that could affect the quality of waters within its region shall furnish, under penalty of perjury, technical or monitoring program reports which the Regional Water Board requires. The burden, including costs, of these reports shall bear a reasonable relationship to the need for the report and the benefits to be obtained from the reports. In requiring those reports, the Regional Water Board shall provide the person with a written explanation with regard to the need for the reports, and shall identify the evidence that supports requiring that person to provide the reports."*
55. The attached Monitoring and Reporting Program No. R5-2009-\_\_\_\_\_ is necessary to assure compliance with these WDRs. Starwood operates the Facility that discharges the waste subject to these WDRs.
56. The California Department of Water Resources set standards for the construction and destruction of groundwater wells, as described in California Well Standards Bulletin 74-90 (June 1991) and Water Well Standards: State of California Bulletin 94-81 (December 1981). These standards, and any more stringent standards adopted by the State or county pursuant to CWC Section 13801, apply to all monitoring wells.

### Public Notice

57. All of the above and the supplemental information and details in the attached Information Sheet, which is incorporated by reference herein, were considered in establishing the conditions of discharge.
58. The Discharger and interested agencies and persons have been notified of the intent to prescribe WDRs for this discharge, and they have been provided an opportunity for a public hearing and an opportunity to submit their written views and recommendations.
59. All comments pertaining to the discharge were heard and considered in a public meeting.

**IT IS HEREBY ORDERED** that, pursuant to Sections 13263 and 13267 of the California Water Code, Starwood Power-Midway, LLC, PAO Investments, LLC, and their agents, successors, and assigns, in order to meet the provisions contained in Division 7 of the California Water Code (CWC) and regulations adopted there under, shall comply with the following:

## **A. Prohibitions**

1. The discharge of wastewater outside of the surface impoundment is prohibited.
2. The discharge of wastewater to surface waters or surface water drainage courses is prohibited.
3. Discharge of waste classified as 'hazardous', as defined in Section 2521(a) of Title 23, California Code of Regulations, Section 2510 et seq., is prohibited. Discharge of waste classified as 'designated,' as defined in CWC Section 13173, in a manner that causes violation of groundwater limitations, is prohibited.
4. Discharge of wastewater in a manner or location other than that described herein is prohibited.

## **B. Facility Specifications**

1. The surface impoundment shall be designed, operated, and maintained to prevent inundation or washout due to floods with a 100-year return frequency.
2. The surface impoundment shall have sufficient storage capacity to accommodate allowable wastewater flow, design seasonal precipitation during winter months, required freeboard levels, high velocity winds, or seismic shaking.
3. The surface impoundment shall be managed to prevent breeding of mosquitoes. Specifically, (a) erosion control measures shall be implemented to minimize irregularities around the perimeter of the water surface, (b) weeds within and around the perimeter shall be minimized through control of water depth, harvesting, or herbicides and, (c) dead algae, vegetation, and debris shall not accumulate on the water surface.
4. The collection, treatment, storage, discharge, or disposal of wastes at the Facility shall not result in: (a) discharge of waste constituents in a manner which could cause degradation of surface water or groundwater, except as discussed in Finding No. 37, 38, and 40, (b) contamination or pollution of surface water or groundwater, (c) a condition of nuisance, (d) exceedance of water quality objectives, or (e) unreasonably affect beneficial uses (as defined by the California Water Code Section 13050).
5. All wells shall have sanitary seals that meet the requirements of the Fresno County Department of Public Health, Environmental Health Division or shall be properly abandoned. A record of the sealing and/or abandonment of such wells shall be sent to the Central Valley Water Board and to the California Department of Water Resources.

## **C. Monitoring Specifications**

1. The Discharger shall comply with Monitoring and Reporting Program No. R5-2009-\_\_\_\_ (MRP), which is part of these WDRs, and any revisions thereto as adopted by the Central Valley Water Board or approved by the Executive Officer. Submittal dates shall be no later than those specified in the MRP for Discharger self-monitoring reports.

#### **D. Effluent Limitations**

1. The wastewater shall not have a pH less than 6.5 or greater than 9.0.

#### **E. Groundwater Limitations**

1. The discharge of wastewater to the surface impoundment shall not cause or contribute to groundwater:
  - a. Containing constituents identified in Title 22, Division 4, Chapter 15 above the maximum contaminant levels quantified therein.
  - b. Containing toxic substances, or any other constituents, in concentrations that cause nuisance or adversely affect beneficial uses.

#### **F. Provisions**

1. The Discharger shall comply with the *Standard Provisions and Reporting Requirements for Waste Discharge Requirements*, dated 1 March 1991, which are part of this Order. This attachment and its individual paragraphs are referred to as Standard Provisions. To the extent that the Standard Provisions are inconsistent with any terms, conditions, or requirements in these WDRs, the WDRs shall govern.
2. The Discharger shall report promptly to the Central Valley Water Board any material change or proposed change in the character, location, or volume of the discharge.
3. The Discharger shall maintain and operate the surface impoundment sufficiently to protect the integrity of containment levees and prevent overtopping or overflows. Unless a California registered civil engineer certifies (based on design, construction, and conditions of operation and maintenance) that less freeboard is adequate, the operating freeboard shall never be less than two feet (measured vertically). As a means of management and to discern compliance with this Provision, the Discharger shall install and maintain a permanent marker with calibration that indicates the water level at design capacity and enables determination of available operational freeboard.
4. The surface impoundment shall be maintained to prevent seepage or leakage caused by erosion, slope failure, or animal burrowing.
5. Wastewater production shall be controlled to the extent necessary to maintain consistent compliance with the terms of the WDRs.
6. The Discharger shall maintain in good working order any facility, control system, or monitoring device installed to achieve compliance with the WDRs.
7. The Discharger shall immediately notify the Central Valley Water Board of any flooding, unpermitted discharge of waste, equipment failure, slope failure, or other change in site conditions which could impair the integrity of the surface impoundment.

8. Any proposed change of the source water for the Facility as described in Finding No. 7 and characterized in Finding No. 9 shall require the submittal of a Report of Waste Discharge by the Discharger.
9. The Discharger shall keep a copy of the WDRs, including the MRP, Information Sheet, attachments, and Standard Provisions, for reference by operating personnel. Key operating personnel shall be familiar with the contents.
10. The Discharger shall, within a reasonable time, furnish any information the Central Valley Water Board may request, to determine whether cause exists for modifying, revoking and reissuing, or terminating the WDRs. The Discharger shall, upon request, also furnish copies of records required to be kept by the WDRs.
11. The Discharger must at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) that are installed or used by the Discharger to achieve compliance with the conditions of the WDRs. Proper operation and maintenance also include adequate laboratory controls and appropriate quality assurance procedures. This Provision requires the operation of back-up or auxiliary facilities or similar systems that are installed by the Discharger only when the operation is necessary to achieve compliance with the conditions of the WDRs.
12. All technical reports and work plans required herein that involve planning, investigation, evaluation, design, or other work requiring interpretation and proper application of engineering or geologic sciences, shall be prepared by or under the direction of persons registered to practice in California pursuant to California Business and Professions Code sections 6735, 7835, and 7835.1. To demonstrate compliance with sections 415 and 3065 of Title 16, California Code of Regulations, all technical reports must contain a statement of the qualifications of the responsible registered professional(s). As required by these laws, completed technical reports and work plans must bear the signature(s) and seal(s) of the registered professional(s) in a manner such that all work can be clearly attributed to the professional responsible for the work.
13. The Discharger must comply with all conditions of the WDRs, including timely submittal of technical and monitoring reports as directed by the Executive Officer. Accordingly, the Discharger shall submit to the Central Valley Water Board on or before each report due date the specified document or, if an action is specified, a written report detailing evidence of compliance with the date and task. If noncompliance is being reported, the reasons for such noncompliance shall be stated, plus an estimate of the date when the Discharger will be in compliance. The Discharger shall notify the Central Valley Water Board by letter when it returns to compliance with the time schedule. Violations may result in enforcement action, including Central Valley Water Board or court orders requiring corrective action or imposing civil monetary liability, or in revision or rescission of the WDRs.
14. In the event of any change in control or ownership of land or waste treatment and storage facilities presently owned or controlled by the Discharger, the Discharger shall notify the succeeding owner or operator of the existence of the WDRs by letter, a copy of which shall be immediately forwarded to the appropriate Central Valley Water Board office.

15. To assume operation under the WDRs, the succeeding owner or operator must apply in writing to the Executive Officer requesting transfer of the WDRs. The request must contain the requesting entity's full legal name, the state of incorporation if a corporation, the address and telephone number of the persons responsible for contact with the Central Valley Water Board and a statement. The statement shall comply with the signatory paragraph of Standard Provision B.3 and state that the new owner or operator assumes full responsibility for compliance with the WDRs. Failure to submit the request shall be considered a discharge without requirements, a violation of the California Water Code. If approved by the Executive Officer, the transfer request will be submitted to the Central Valley Water Board for its consideration of transferring the ownership of the WDRs at one of its regularly scheduled meetings.
16. If the Central Valley Water Board determines that waste constituents in the discharge have reasonable potential to cause or contribute to an exceedance of an objective for groundwater, the WDRs may be reopened for consideration of addition or revision of appropriate numerical effluent or groundwater limitations for the problem constituents.
17. The WDRs may be reopened to address any changes in state plans, policies, or regulations that would affect water quality requirements for the discharge and as authorized by state law.
18. A Sampling and Analysis Plan shall be submitted to the Executive Officer for review and approval within **45 days** following adoption of the WDRs. The approved Sampling and Analysis Plan shall at a minimum include: sample collection procedures describing purging techniques; sampling equipment and decontamination of sampling equipment; sample preservation information and shipment procedures; sample analytical methods and procedures; sample quality assurance/quality control procedures; and Chain of Custody control.

I, PAMELA C. CREEDON, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, Central Valley Region, on \_\_\_\_\_ 2009.

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PAMELA C. CREEDON, Executive Officer

Attachments:

- Monitoring and Reporting Program
- A. Location Map
- B. Facility Map
- C. Vicinity Map
- D. Site Map
- Information Sheet
- Standard Provisions

DLW/SRG: 02/26/2009